United States
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TABLES OF

COMMON PROBABILITY DISTRIBUTIONS

by

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ABSTRACT:

Tables that are available for certain probability distributions are limited in percentage values or parameter values. This report makes available additional such values for several probability distributions that occur in common practice.

Prepared by:

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1. INTRODUCTION.

In the course of our work we have occasionally encountered a need for values of certain probability distributions at percentage values or parameter values other than those readily available. With the interest and invaluable assistance of some of our students several of these exceptional values were obtained from various computer programs. In the process of generating these values many of the commonly tabulated values were obtained as well, partially as a check on the accuracy of the computer programs being used. It occurred to us that these tables might be useful to others and we have decided to make them available by means of this technical report.

Of several tables that were prepared, five are presented in this report and are related to the normal, chi-square, F, t and Poisson probability distributions. The values were all obtained from the IBM 360/67 computer at the Naval Postgraduate School. The accuracy of the tables varies according to the programs written for each and we have reported only those significant figures that appeared reliable. Programs for Tables 1, 2 and 5 were written by Lt. Ozden Ornek of the Turkish Navy and we are indebted to him for his time and effort. To Lt. W. D. Free, SC, USN, goes a special acknowledgement for Table 3, the F-distribution using the IBM Incomplete Beta sub-routine. We are also indebted to Pat Combs for her programming assistance and to Pamela Crean for her typing efforts.

2. Table 1. Normal C.D.F.

Entries are values of

$$\Phi(x) = \int_{-\infty}^{x} \frac{1}{\sqrt{2\pi}} e^{-(1/2)t^2} dt$$

for the values of $x \geq 0$ shown. For $x < 0$, use the identity

$$\Phi(x) = 1 - \Phi(-x).$$

The entries are to be read with a decimal point preceding the digits.

x	0	1	2	3	4	5	6	7	8	9
0.00	5000	5004	5008	5012	5016	5020	5024	5028	5032	5036
0.01	5040	5044	5048	5052	5056	5060	5064	5068	5072	6076
0.02	5080	5084	5088	5092	5096	5100	5104	5108	5112	5116
0.03	5120	5124	5128	5132	5136	5140	5144	5148	5152	5156
0.04	5160	5164	5168	5171	5175	5179	5183	5187	5191	5195
0.05	5199	5203	5207	5211	5215	5219	5223	5227	5231	5235
0.06	5239	5243	5247	5251	5255	5259	5263	5267	5271	5275
0.07	5279	5283	5287	5291	5295	5299	5305	5307	5311	5315
0.08	5319	5323	5327	5331	5335	5339	5343	5347	5351	5355
0.09	5359	5363	5367	5370	5374	5378	5382	5386	5390	5394
0.10	5398	5402	5406	5410	5414	5418	5422	5426	5430	5434
0.11	5438	5442	5446	5450	5454	5458	5462	5466	5470	5474
0.12	5478	5482	5486	5489	5493	5497	5501	5505	5509	5513
0.13	5517	5521	5525	5529	5533	5537	5541	5545	5549	5553
0.14	5557	5561	5565	5569	5572	5576	5580	5584	5588	5592
0.15	5596	5600	5604	5608	5612	5616	5620	5624	5628	5632
0.16	5636	5640	5643	5647	5651	5655	5659	5663	5667	5671
0.17	5675	5679	5683	5687	5691	5695	5699	5702	5706	5710
0.18	5714	5718	5722	5726	5730	5734	5738	5742	5746	5750
0.19	5753	5757	5761	5765	5769	5773	5777	5781	5785	5789
0.20	5793	5797	5800	5804	5808	5812	5816	5820	5824	5828
0.21	5832	5836	5839	5843	5847	5851	5855	5859	5863	5867
0.22	5871	5875	5878	5882	5886	5890	5894	5898	5902	5906
0.23	5910	5913	5917	5921	5925	5929	5933	5937	5941	5944
0.24	5948	5952	5956	5960	5964	5968	5972	5975	5979	5983
0.25	5987	5991	5995	5999	6003	6006	6010	6014	6018	6022
0.26	6026	6030	6033	6037	6041	6045	6049	6053	6057	6060
0.27	6064	6068	6072	6076	6080	6083	6087	6091	6095	6099
0.28	6103	6106	6110	6114	6118	6122	6126	6129	6133	6137
0.29	6141	6145	6149	6152	6156	6160	6164	6168	6171	6175
0.30	6179	6183	6187	6191	6194	6198	6202	6206	6210	6213
0.31	6217	6221	6225	6229	6232	6236	6240	6244	6248	6251
0.32	6255	6259	6263	6267	6270	6274	6278	6282	6285	6289
0.33	6293	6297	6301	6304	6308	6312	6316	6319	6323	6327
0.34	6331	6334	6338	6342	6346	6350	6353	6357	6361	6365
0.35	6368	6372	6376	6380	6383	6387	6391	6395	6398	6402
0.36	6406	6410	6413	6417	6421	6424	6428	6432	6436	6439
0.37	6443	6447	6451	6454	6458	6462	6465	6469	6473	6477
0.38	6480	6484	6488	6491	6495	6499	6503	6506	6510	6514
0.39	6517	6521	6525	6528	6532	6536	6539	6543	6547	6551

x	0	1	2	3	4	5	6	7	8	9
0.40	6554	6558	6562	6565	6569	6573	6576	6580	6584	6587
0.41	6591	6595	6598	6602	6606	6609	6613	6617	6620	6624
0.42	6628	6631	6635	6639	6642	6646	6649	6653	6657	6660
0.43	6664	6668	6671	6675	6679	6682	6686	6689	6693	6697
0.44	6700	6704	6708	6711	6715	6718	6722	6726	6729	6733
0.45	6736	6740	6744	6747	6751	6754	6758	6762	6765	6769
0.46	6772	6776	6780	6783	6787	6790	6794	6798	6801	6805
0.47	6808	6812	6815	6819	6823	6826	6830	6833	6837	6840
0.48	6844	6847	6851	6855	6858	6862	6865	6869	6872	6876
0.49	6879	6883	6886	6890	6893	6897	6901	6904	6908	6911
0.50	6915	6918	6922	6925	6929	6932	6936	6939	6943	6946
0.51	6950	6953	6957	6960	6964	6967	6971	6974	6978	6981
0.52	6985	6988	6992	6995	6999	7002	7006	7009	7013	7016
0.53	7019	7023	7026	7030	7033	7037	7040	7044	7047	7051
0.54	7054	7057	7061	7064	7068	7071	7075	7078	7082	7085
0.55	7088	7092	7095	7099	7102	7106	7109	7112	7116	7119
0.56	7123	7126	7129	7133	7136	7140	7143	7146	7150	7153
0.57	7157	7160	7163	7167	7170	7174	7177	7180	7184	7187
0.58	7190	7194	7197	7201	7204	7207	7211	7214	7217	7221
0.59	7224	7227	7231	7234	7237	7241	7244	7247	7251	7254
0.60	7257	7261	7264	7267	7271	7274	7277	7281	7284	7287
0.61	7291	7294	7297	7301	7304	7307	7311	7314	7317	7320
0.62	7324	7327	7330	7334	7337	7340	7343	7347	7350	7353
0.63	7357	7360	7363	7366	7370	7373	7376	7379	7883	7386
0.64	7389	7392	7396	7399	7402	7405	7409	7412	7415	7418
0.65	7422	7425	7428	7431	7434	7438	7441	7444	7447	7451
0.66	7454	7457	7460	7463	7467	7470	7473	7476	7479	7483
0.67	7486	7489	7492	7495	7498	7502	7505	7508	7511	7514
0.68	7517	7521	7524	7527	7530	7533	7536	7540	7543	7546
0.69	7549	7552	7555	7558	7562	7565	7568	7571	7574	7577
0.70	7580	7583	7587	7590	7593	7596	7599	7602	7605	7608
0.71	7611	7615	7618	7621	7624	7627	7630	7633	7636	7639
0.72	7642	7645	7649	7652	7655	7658	7661	7664	7667	7670
0.73	7673	7676	7679	7682	7685	7688	7691	7694	7697	7700
0.74	7703	7707	7710	7713	7716	7719	7722	7725	7728	7731
0.75	7734	7737	7740	7743	7746	7749	7752	7755	7758	7761
0.76	7764	7767	7770	7773	7776	7779	7782	7785	7788	7791
0.77	7793	7796	7799	7802	7805	7808	7811	7814	7817	7820
0.78	7823	7826	7829	7832	7835	7838	7841	7844	7847	7849
0.79	7852	7855	7858	7861	7864	7867	7870	7873	7876	7879

x	0	1	2	3	4	5	6	7	8	9
0.80	7881	7884	7887	7890	7893	7896	7899	7902	7905	7907
0.81	7910	7913	7916	7919	7922	7925	7927	7930	7933	7936
0.82	7939	7942	7945	7947	7950	7953	7956	7959	7962	7964
0.83	7967	7970	7973	7976	7979	7981	7984	7987	7990	7993
0.84	7995	7998	8001	8004	8007	8009	8012	8015	8018	8021
0.85	8023	8026	8029	8032	8034	8037	8040	8043	8046	8048
0.86	8051	8054	8057	8059	8062	8065	8068	8070	8073	8076
0.87	8078	8081	8084	8087	8089	8092	8095	8098	8100	8103
0.88	8106	8108	8111	8114	8117	8119	8122	8125	8127	8130
0.89	8133	8135	8138	8141	8143	8146	8149	8151	8154	8157
0.90	8159	8162	8165	8167	8170	8173	8175	8178	8181	8183
0.91	8186	8189	8191	8194	8196	8199	8202	8204	8207	8210
0.92	8212	8215	8217	8220	8223	8225	8228	8230	8233	8236
0.93	8238	8241	8243	8246	8248	8251	8254	8256	8259	8261
0.94	8264	8266	8269	8272	8274	8277	8279	8282	8284	8287
0.95	8289	8292	8295	8297	8300	8302	8305	8307	8310	8312
0.96	8315	8317	8320	8322	8325	8327	8330	8332	8335	8337
0.97	8340	8342	8345	8347	8350	8352	8355	8357	8360	8362
0.98	8365	8367	8370	8372	8374	8377	8379	8382	8384	8387
0.99	8389	8392	8394	8396	8399	8401	8404	8406	8409	8311
1.00	8413	8416	8418	8421	8423	8426	8428	8430	8433	8435
1.01	8438	8440	8442	8445	8447	8449	8452	8454	8457	8459
1.02	8461	8464	8466	8468	8471	8473	8476	8478	8480	8483
1.03	8485	8487	8490	8492	8494	8497	8499	8501	8504	8506
1.04	8508	8511	8513	8515	8518	8520	8522	8525	8527	8529
1.05	8531	8534	8536	8538	8541	8543	8545	8547	8550	8552
1.06	8554	8557	8559	8561	8563	8566	8568	8570	8572	8575
1.07	8577	8579	8581	8584	8586	8588	8590	8593	8595	8597
1.08	8599	8602	8604	8606	8608	8610	8613	8615	8617	8619
1.09	8621	8624	8626	8628	8630	8632	8635	8637	8639	8641
1.10	8643	8646	8648	8650	8652	8654	8656	8659	8661	8663
1.11	8665	8667	8669	8671	8674	8676	8678	8680	8682	8684
1.12	8686	8689	8691	8693	8695	8697	8699	8701	8703	8706
1.13	8708	8710	8712	8714	8716	8718	8720	8722	8724	8726
1.14	8729	8731	8733	8735	8737	8739	8741	8743	8745	8747
1.15	8749	8751	8753	8755	8757	8760	8762	8764	8766	8768
1.16	8770	8772	8774	8776	8778	8780	8782	8784	8786	8788
1.17	8790	8792	8794	8796	8798	8800	8802	8804	8806	8808
1.18	8810	8812	8814	8816	8818	8820	8822	8824	8826	8828
1.19	8830	8832	8834	8836	8838	8840	8842	8843	8845	8847

x	0	1	2	3	4	5	6	7	8	9
1.20	8849	8851	8853	8855	8857	8859	8861	8863	8865	8867
1.21	8869	8871	8872	8874	8876	8878	8880	8882	8884	8886
1.22	8888	8890	8891	8893	8895	8897	8899	8901	8903	8905
1.23	8907	8908	8910	8912	8914	8916	8918	8920	8921	8923
1.24	8925	8927	8929	8931	8933	8934	8936	8938	8940	8942
1.25	8944	8945	8947	8949	8951	8953	8954	8956	8958	8960
1.26	8962	8963	8965	8967	8969	8971	8972	8974	8976	8978
1.27	8980	8981	8983	8985	8987	8988	8990	8992	8994	8996
1.28	8997	8999	9001	9003	9004	9006	9008	9010	9011	9013
1.29	9015	9016	9018	9020	9022	9023	9025	9027	9029	9030
1.30	9032	9034	9035	9037	9039	9041	9042	9044	9046	9047
1.31	9049	9051	9052	9054	9056	9057	9059	9061	9062	9064
1.32	9066	9067	9069	9071	9072	9074	9076	9077	9079	9081
1.33	9082	9084	9086	9087	9089	9091	9092	9094	9096	9097
1.34	9099	9100	9102	9104	9105	9107	9108	9110	9112	9113
1.35	9115	9117	9118	9120	9121	9123	9125	9126	9128	9129
1.36	9131	9132	9134	9136	9137	9139	9140	9142	9143	9145
1.37	9147	9148	9150	9151	9153	9154	9156	9157	9159	9161
1.38	9162	9164	9165	9167	9168	9170	9171	9173	9174	9176
1.39	9177	9179	9180	9182	9183	9185	9186	9188	9189	9191
1.40	9192	9194	9195	9197	9198	9200	9201	9203	9204	9206
1.41	9207	9209	9210	9212	9213	9215	9216	9218	9219	9221
1.42	9222	9223	9225	9226	9228	9229	9231	9232	9234	9235
1.43	9236	9238	9239	9241	9242	9244	9245	9246	9248	9249
1.44	9251	9252	9253	9255	9256	9258	9259	9261	9262	9263
1.45	9265	9266	9267	9269	9270	9272	9273	9274	9276	9277
1.46	9279	9280	9281	9283	9284	9285	9287	9288	9289	9291
1.47	9292	9294	9295	9296	9298	9299	9300	9302	9303	9304
1.48	9306	9307	9308	9310	9311	9312	9314	9315	9316	9318
1.49	9319	9320	9322	9323	9324	9325	9327	9328	9329	9331
1.50	9332	9333	9335	9336	9337	9338	9340	9341	9342	9344
1.51	9345	9346	9347	9349	9350	9351	9352	9354	9355	9356
1.52	9357	9359	9360	9361	9362	9364	9365	9366	9367	9369
1.53	9370	9371	9372	9374	9375	9376	9377	9379	9380	9381
1.54	9382	9383	9385	9386	9387	9388	9389	9391	9392	9393
1.55	9394	9395	9397	9398	9399	9400	9401	9403	9404	9405
1.56	9406	9407	9409	9410	9411	9412	9413	9414	9416	9417
1.56	9418	9419	9420	9421	9423	9424	9245	9426	9427	9428
1.58	9429	9431	9432	9433	9434	9435	9436	9437	9439	9440
1.59	9441	9442	9443	9444	9445	9446	9448	9449	9450	9451

x	0	1	2	3	4	5	6	7	8	9
1.60	9452	9453	9454	9455	9456	9458	9459	9460	9461	9462
1.61	9463	9464	9465	9466	9467	9468	9470	9471	9472	9473
1.62	9474	9475	9476	9477	9478	9479	9480	9481	9482	9483
1.63	9484	9486	9487	9488	9489	9490	9491	9492	9493	9494
1.64	9495	9496	9497	9498	9499	9500	9501	9502	9503	9504
1.6	9452	9463	9474	9484	9495	9505	9515	9525	9535	9545
1.7	9554	9564	9573	9582	9591	9599	9608	9616	9625	9633
1.8	9641	9649	9456	9664	9671	9678	9686	9693	9699	9706
1.9	9713	9719	9726	9732	9738	9744	9750	9756	9761	9767
2.0	9772	9778	9783	9788	9793	9798	9803	9808	9812	9817
2.1	9821	9826	9830	9834	9838	9842	9846	9850	9854	9857
2.2	9861	9864	9868	9871	9875	9878	9881	9884	9887	9890
2.3	9893	9896	9898	9901	9904	9906	9909	9911	9913	9916
2.4	9918	9920	9922	9925	9927	9929	9931	9932	9934	9936
2.5	9938	9940	9941	9943	9945	9946	9948	9949	9951	9952
2.6	9953	9955	9956	9957	9959	9960	9961	9962	9963	9964
2.7	9965	9966	9967	9968	9969	9970	9971	9972	9973	9974
2.8	9974	9975	9976	9977	9977	9978	9979	9979	9980	9981
2.9	9981	9982	9982	9983	9984	9984	9985	9985	9986	9986
3.0	9987									
3.1	9990									
3.2	9993									
3.3	9995									
3.4	9997									
3.5	9998									
3.6	9998									
3.7	9999									
3.8	9999									

3. Table 2. Chi-square C.D.F.

Entries are values of x such that

$$\alpha = \int_0^x \frac{1}{2^{n/2}\Gamma\left(\frac{n}{2}\right)} t^{(n/2)-1} e^{-(t/2)}\, dt$$

for various α and degrees of freedom $n = 1,2,\ldots,40$.

n	α									
	0.005	0.010	0.025	0.050	0.100	0.150	0.200	0.250	0.300	0.350
1	0.000	0.000	0.001	0.004	0.016	0.036	0.064	0.102	0.148	0.206
2	0.010	0.020	0.051	0.103	0.211	0.325	0.446	0.575	0.713	0.862
3	0.072	0.115	0.216	0.352	0.584	0.798	1.005	1.212	1.424	1.642
4	0.207	0.297	0.484	0.711	1.064	1.366	1.649	1.923	2.195	2.470
5	0.412	0.554	0.831	1.145	1.610	1.994	2.342	2.674	3.000	3.325
6	0.676	0.872	1.237	1.635	2.204	2.661	3.070	3.454	3.828	4.197
7	0.989	1.239	1.690	2.167	2.833	3.358	3.822	4.255	4.671	5.082
8	1.344	1.646	2.180	2.733	3.490	4.078	4.594	5.071	5.527	5.975
9	1.735	2.088	2.700	3.325	4.168	4.816	5.380	5.899	6.393	6.876
10	2.156	2.558	3.247	3.940	4.865	5.570	6.179	6.737	7.267	7.783
11	2.603	3.053	3.816	4.575	5.578	6.336	6.989	7.584	8.148	8.695
12	3.074	3.571	4.404	5.226	6.304	7.114	7.807	8.438	9.034	9.612
13	3.565	4.107	5.009	5.892	7.041	7.901	8.634	9.299	9.926	10.532
14	4.075	4.660	5.629	6.571	7.790	8.696	9.467	10.165	10.822	11.455
15	4.600	5.229	6.262	7.261	8.547	9.499	10.307	11.036	11.721	12.381
16	5.142	5.812	6.908	7.962	9.312	10.309	11.152	11.912	12.624	13.310
17	5.697	6.407	7.564	8.682	10.085	11.125	12.002	12.792	13.531	14.241
18	6.265	7.015	8.231	9.390	10.865	11.946	12.857	13.675	14.440	15.174
19	6.843	7.632	8.906	10.117	11.651	12.773	13.716	14.562	15.352	16.109
20	7.434	8.260	9.591	10.851	12.443	13.604	14.578	15.452	16.266	17.046
21	8.033	8.897	10.283	11.591	13.240	14.439	15.444	16.344	17.182	17.984
22	8.643	9.542	10.982	12.338	14.042	15.279	16.314	17.240	18.101	18.924
23	9.260	10.195	11.688	13.090	14.848	16.122	17.186	18.137	19.021	19.866
24	9.886	10.856	12.401	13.848	15.659	16.969	18.062	19.037	19.943	20.808
25	10.519	11.523	13.120	14.611	16.473	17.818	18.940	19.939	20.867	21.752
26	11.160	12.198	13.844	15.379	17.292	18.671	19.820	20.843	21.792	22.698
27	11.807	12.878	14.573	16.151	18.114	19.527	20.703	21.749	22.719	22.644
28	12.461	13.565	15.308	16.928	18.939	20.386	21.588	22.657	23.648	24.591
29	13.120	14.256	16.047	17.708	19.768	21.247	22.475	23.566	24.577	25.539
30	13.787	14.954	16.791	18.493	20.599	22.110	23.364	24.478	25.508	26.488
31	14.457	15.655	17.538	19.280	21.433	22.976	24.255	25.390	26.440	27.438
32	15.134	16.362	18.291	20.072	22.271	23.844	25.148	26.304	27.373	29.389
33	15.814	17.073	19.046	20.866	23.110	24.714	26.042	27.219	28.307	29.340
34	16.501	17.789	19.806	21.664	23.952	25.586	26.938	28.136	29.242	30.293
35	17.191	18.508	20.569	22.465	24.796	26.460	27.836	29.054	30.178	31.246
36	17.887	19.233	21.336	23.269	25.643	27.336	28.735	29.973	31.115	32.200
37	18.584	19.960	22.105	24.075	26.492	28.214	29.635	30.893	32.053	33.154
38	19.289	20.691	22.878	24.884	27.343	29.093	30.538	31.815	32.992	34.109
39	19.994	21.425	23.654	25.695	28.196	29.974	31.440	32.737	33.932	35.064
40	20.706	22.164	24.433	26.509	29.050	30.856	32.345	33.660	34.872	36.021

n	α = 0.400	0.450	0.500	0.550	0.600	0.650	0.700	0.750	0.800	0.850
1	0.275	0.357	0.455	0.571	0.708	0.874	1.074	1.324	1.643	2.073
2	1.022	1.196	1.386	1.597	1.833	2.100	2.408	2.773	3.219	3.794
3	1.869	2.109	2.366	2.643	2.946	3.283	3.665	4.108	4.642	5.317
4	2.753	3.047	3.357	3.687	4.045	4.438	4.878	5.385	5.989	6.745
5	3.656	3.996	4.351	4.728	5.132	5.573	6.064	6.626	7.289	8.115
6	4.570	4.952	5.348	5.765	6.211	6.695	7.231	7.841	8.558	9.446
7	5.493	5.912	6.346	6.800	7.283	7.806	8.383	9.037	9.803	10.748
8	6.423	6.877	7.344	7.832	8.350	8.909	9.524	10.219	11.030	12.027
9	7.357	7.843	8.343	8.863	9.414	10.006	10.656	11.389	12.242	13.288
10	8.296	8.812	9.342	9.892	10.473	11.097	11.781	12.549	13.442	14.534
11	9.237	9.783	10.341	10.920	11.530	12.184	12.899	13.701	14.631	15.767
12	10.182	10.755	11.340	11.946	12.584	13.266	14.011	14.845	15.812	16.989
13	11.129	11.729	12.340	12.972	13.636	14.345	15.119	15.984	16.985	18.202
14	12.079	12.703	13.339	13.996	14.685	15.421	16.222	17.117	18.151	19.406
15	13.030	13.679	14.339	15.020	15.733	16.494	17.322	18.245	19.311	20.603
16	13.983	14.656	15.338	16.042	16.780	17.565	18.418	19.369	20.465	21.793
17	14.937	15.633	16.338	17.064	17.824	18.633	19.511	20.489	21.614	22.977
18	15.893	16.611	17.338	18.086	18.868	19.699	20.601	21.605	22.760	24.156
19	16.850	17.589	18.338	19.107	19.910	20.764	21.689	22.718	23.900	25.329
20	17.809	18.569	19.337	20.127	20.951	21.826	22.774	23.828	25.038	26.498
21	18.768	19.548	20.337	21.147	21.991	22.888	23.858	24.935	26.171	27.662
22	19.729	20.529	21.337	22.166	23.031	23.947	24.939	26.039	27.302	28.822
23	20.690	21.510	22.337	23.185	24.069	25.006	26.018	27.141	28.429	29.979
24	21.652	22.491	23.337	24.204	25.106	26.062	27.096	28.241	29.553	31.132
25	22.616	23.472	24.336	25.222	26.143	27.118	28.172	29.339	30.675	32.282
26	23.579	24.454	25.336	26.240	27.179	28.173	29.246	30.435	31.795	33.430
27	24.544	25.437	26.336	27.257	28.214	29.226	30.319	31.528	32.912	34.573
28	25.509	26.420	27.336	28.274	29.249	30.279	31.391	32.620	34.027	35.715
29	26.475	27.402	28.336	29.291	30.282	31.331	32.461	33.711	35.139	36.854
30	27.442	28.386	29.336	30.307	31.316	32.382	33.530	34.800	36.250	37.990
31	28.409	29.369	30.336	31.323	32.349	33.431	34.598	35.887	37.359	39.124
32	29.376	30.353	31.336	32.339	33.381	34.480	35.665	36.973	38.466	40.256
33	30.344	31.337	32.336	33.355	34.412	35.529	36.731	38.057	39.572	41.386
34	31.313	32.322	33.336	34.371	35.444	36.576	37.795	39.141	40.676	42.514
35	32.282	33.306	34.336	35.386	36.474	37.623	38.859	40.223	41.778	43.640
36	33.252	34.291	35.336	36.401	37.505	38.669	39.922	41.303	42.879	44.764
37	34.222	35.276	36.335	37.416	38.535	39.715	40.984	42.383	43.978	45.886
38	35.192	36.262	37.335	38.430	39.564	40.760	42.045	43.462	45.076	47.007
39	36.163	37.247	38.335	39.445	40.593	41.804	43.105	44.539	46.173	48.126
40	37.134	38.233	39.335	40.459	41.622	42.848	44.165	45.616	47.268	49.244

n	α				
	0.900	0.950	0.975	0.990	0.995
1	2.706	3.843	5.025	6.637	7.882
2	4.605	5.992	7.378	9.210	10.597
3	6.251	7.815	9.348	11.344	12.837
4	7.779	9.488	11.143	13.277	14.860
5	9.236	11.070	12.832	15.085	16.748
6	10.645	12.592	14.449	16.812	18.548
7	12.017	14.067	16.012	18.474	20.276
8	13.362	15.507	17.534	20.090	21.954
9	14.684	16.919	19.022	21.665	23.587
10	15.987	18.307	20.483	23.209	25.188
11	17.275	19.675	21.920	24.724	26.755
12	18.549	21.026	23.337	26.217	28.300
13	19.812	22.362	24.735	27.687	29.817
14	21.064	23.685	26.119	29.141	31.319
15	22.307	24.996	27.488	30.577	32.799
16	23.542	26.296	28.845	32.000	34.267
17	24.769	27.587	30.190	33.408	35.716
18	25.989	28.869	31.526	34.805	37.156
19	27.203	30.143	32.852	36.190	38.580
20	28.412	31.410	34.170	37.566	39.997
21	29.615	32.670	35.478	38.930	41.399
22	30.813	33.924	36.781	40.289	42.796
23	32.007	35.172	38.075	41.637	44.179
24	33.196	36.415	39.364	42.980	45.558
25	34.381	37.652	40.646	44.313	46.925
26	35.563	38.885	41.923	45.642	48.290
27	36.741	40.113	43.194	46.962	49.642
28	37. 916	41.337	44.461	48.278	50.993
29	39.087	42.557	45.722	49.586	52.333
30	40.256	43.773	46.979	50.892	53.672
31	41.422	44.985	48.231	52.190	55.000
32	42.585	46.194	49.480	53.486	56.328
33	43.745	47.400	50.724	54.774	57.646
34	44.903	48.602	51.966	56.061	58.964
35	46.059	49.802	53.203	57.340	60.272
36	47.212	50.998	54.437	58.619	61.581
37	48.363	52.192	55.667	59.891	62.880
38	49.513	53.384	56.896	61.162	64.181
39	50.660	54.572	58.119	62.426	65.473
40	51.805	55.758	59.342	63.691	66.766

4. Table 3. Values of the F C.D.F.

Entries are values of x such that

$$\alpha = \int_0^x \frac{\Gamma\left(\frac{n+m}{2}\right)\left(\frac{n}{m}\right)^{\frac{n}{2}} t^{\frac{n}{2}-1}}{\Gamma\left(\frac{n}{2}\right)\Gamma\left(\frac{m}{2}\right)\left(1+\frac{n}{m}t\right)^{\frac{n+m}{2}}}\,dt$$

for various values of α and degrees of freedom n and m. Letting x be denoted $F_{\alpha;n,m}$, the table may be used for values corresponding to $1-\alpha$ by means of the identity $F_{\alpha;n,m} \cdot F_{1-\alpha;m,n} = 1$.

α	m ↓	n → 1	2	3	4	5	6	7	8	9	10	15	20	30	50	100	200
.800		9.5	12.0	13.1	13.6	14.0	14.3	14.4	14.6	14.7	14.8	15.0	15.2	15.3	15.4	15.5	15.5
.825		12.6	15.8	17.2	17.9	18.4	18.7	19.0	19.2	19.3	19.4	19.7	19.9	20.1	20.2	20.3	20.4
.850		17.3	21.7	23.6	24.6	25.2	25.7	26.0	26.2	26.4	26.5	27.0	27.2	27.5	27.7	27.8	27.9
.875		25.3	31.5	34.1	35.6	36.5	37.1	37.6	37.9	38.2	38.4	39.1	39.4	39.7	40.0	40.2	40.3
.900		39.9	49.5	53.6	55.8	57.2	58.2	58.9	59.4	59.9	60.2	61.2	61.7	62.3	62.7	63.0	63.2
.925	1	71.4	88.4	95.6	99.6	102.1	103.8	105.0	106.0	106.7	107.3	109.1	110.0	111.0	111.7	112.3	112.6
.950		161.4	199.5	215.7	224.6	230.2	234.0	236.8	238.9	240.5	241.9	245.9	248.0	250.1	251.8	253.0	253.7
.975		647.8	799.5	864.2	899.6	921.9	937.1	948.2	956.7	963.3	968.6	984.9	993.1	1001.4	1008.1	1013.2	1015.7
.990		4052.2	4999.5	5403.3	5624.5	5763.6	5859.0	5928.3	5981.2	6022.5	6055.9	6157.3	6208.6	6260.7	6302.5	6334.0	6349.9
.995		16211.	20000.	21615.	22499.	23056.	23438.	23716.	23925.	24091.	24225.	24629.	24837.	25043.	25211.	25338.	25401.
.800		3.5556	4.0000	4.1563	4.2361	4.2844	4.3168	4.3401	4.3576	4.3712	4.3822	4.4151	4.4316	4.4482	4.4614	4.4714	4.4764
.825		4.2622	4.7143	4.8721	4.9523	5.0008	5.0334	5.0567	5.0743	5.0880	5.0989	5.1319	5.1484	5.1650	5.1783	5.1883	5.1933
.850		5.2072	5.6667	5.8258	5.9065	5.9553	5.9880	6.0114	6.0290	6.0427	6.0537	6.0867	6.1033	6.1199	6.1332	6.1431	6.1481
.875		6.5333	7.0000	7.1605	7.2416	7.2907	7.3234	7.3469	7.3646	7.3783	7.3893	7.4224	7.4390	7.4556	7.4689	7.4789	7.4839
.900		8.5263	9.0000	9.1618	9.2434	9.2926	9.3255	9.3491	9.3668	9.3805	9.3916	9.4247	9.4413	9.4579	9.4712	9.4812	9.4862
.925	2	11.853	12.333	12.496	12.578	12.628	12.661	12.684	12.702	12.716	12.727	12.760	12.777	12.793	12.807	12.817	12.822
.950		18.513	19.000	19.164	19.274	19.297	19.329	19.354	19.371	19.385	19.396	19.429	19.445	19.463	19.476	19.486	19.491
.975		38.506	39.000	39.167	39.249	39.299	39.331	39.355	39.373	39.388	39.396	39.432	39.447	39.465	39.476	39.488	39.491
.990		98.502	98.999	99.165	99.250	99.299	99.332	99.356	99.375	99.389	99.399	99.432	99.450	99.466	99.478	99.491	99.495
.995		198.50	199.00	199.17	199.25	199.30	199.33	199.36	199.38	199.39	199.40	199.43	199.45	199.46	199.48	199.49	199.49

α	m ↓	n → 1	2	3	4	5	6	7	8	9	10	15	20	30	50	100	200
.800		2.6822	2.8860	2.9359	2.9555	2.9652	2.9707	2.9741	2.9763	2.9779	2.9791	2.9819	2.9830	2.9838	2.9842	2.9844	2.9845
.825		3.1302	3.2944	3.3260	3.3351	3.3381	3.3389	3.3389	3.3385	3.3380	3.3375	3.3351	3.3335	3.3316	3.3298	3.3284	3.3276
.850		3.7030	3.8133	3.8209	3.8166	3.8109	3.8058	3.8013	3.7976	3.7945	3.7918	3.7828	3.7778	3.7724	3.7678	3.7642	3.7624
.875		4.4651	4.5000	4.4750	4.4526	4.4354	4.4223	4.4120	4.4038	4.3971	4.3915	4.3738	4.3643	4.3543	4.3460	4.3396	4.3363
.900		5.5383	5.4624	5.3908	5.3426	5.3092	5.2847	5.2662	5.2517	5.2400	5.2304	5.2003	5.1845	5.1681	5.1546	5.1443	5.1390
.925	3	7.1865	6.9343	6.7901	6.7021	6.6435	6.6017	6.5705	6.5463	6.5269	6.5112	6.4622	6.4367	6.4105	6.3891	6.3727	6.3644
.950		10.128	9.5521	9.2766	9.1172	9.0135	8.9406	8.8867	8.8452	8.8123	8.7855	8.7029	8.6602	8.6166	8.5810	8.5539	8.5402
.975		17.443	16.044	15.439	15.101	14.885	14.735	14.624	14.540	14.473	14.419	14.253	14.167	14.080	14.010	13.956	13.929
.990		34.116	30.816	29.457	28.710	28.237	27.911	27.672	27.489	27.345	27.229	26.872	26.690	26.505	26.354	26.240	26.183
.995		55.552	49.799	47.467	46.195	45.392	44.839	44.434	44.126	43.883	43.686	43.085	42.778	42.466	42.213	42.022	41.925
.800		2.3507	2.4721	2.4847	2.4826	2.4780	2.4733	2.4691	2.4654	2.4623	2.4596	2.4503	2.4450	2.4392	2.4342	2.4302	2.4281
.825		2.7111	2.7809	2.7702	2.7549	2.7418	2.7311	2.7225	2.7155	2.7097	2.7048	2.6888	2.6801	2.6707	2.6629	2.6567	2.6535
.850		3.1620	3.1640	3.1236	3.0916	3.0678	3.0497	3.0357	3.0245	3.0153	3.0078	2.9835	2.9704	2.9567	2.9453	2.9364	2.931[illegible]
.875		3.7468	3.6568	3.5773	3.5236	3.4859	3.4582	3.4371	3.4204	3.4070	3.3959	3.3609	3.3424	3.3231	3.3070	3.2947	3.288[illegible]
.900		4.5448	4.3246	4.1909	4.1072	4.0506	4.0098	3.9790	3.9549	3.9357	3.9199	3.8704	3.8443	3.8174	3.7952	3.7782	3.769[illegible]
.925	4	5.7219	5.3030	5.0883	4.9604	4.8756	4.8154	4.7704	4.7355	4.7077	4.6850	4.6142	4.5772	4.5392	4.5079	4.4840	4.4719
.950		7.7086	6.9443	6.5914	6.3882	6.2561	6.1631	6.0942	6.0410	5.9988	5.9644	5.8578	5.8026	5.7459	5.6995	5.6641	5.6461
.975		12.218	10.649	9.9792	9.6045	9.3645	9.1973	9.0741	8.9796	8.9047	8.8439	8.6565	8.5599	8.4613	8.3808	8.3195	8.2885
.990		21.198	18.000	16.694	15.977	15.522	15.207	14.976	14.799	14.659	14.546	14.198	14.020	13.838	13.690	13.577	13.520
.995		31.333	26.284	24.259	23.154	22.456	21.974	21.622	21.352	21.139	20.967	20.438	20.167	19.891	19.667	19.497	19.411
.800		2.1782	2.2591	2.2530	2.2397	2.2275	2.2174	2.2090	2.2021	2.1963	2.1914	2.1751	2.1660	2.1562	2.1479	2.1413	2.1379
.825		2.4956	2.5202	2.4889	2.4612	2.4397	2.4231	2.4099	2.3993	2.3906	2.3833	2.3596	2.3467	2.3330	2.3214	2.3124	2.3077
.850		2.8878	2.8395	2.7764	2.7309	2.6980	2.6733	2.6543	2.6391	2.6268	2.6165	2.5838	2.5662	2.5477	2.5322	2.5202	2.5140
.875		3.3890	3.2435	3.1392	3.0708	3.0232	2.9884	2.9618	2.9408	2.9239	2.9100	2.8658	2.8423	2.8177	2.7973	2.7815	2.7734
.900		4.0604	3.7797	3.6195	3.5202	3.4530	3.4045	3.3679	3.3393	3.3163	3.2974	3.2380	3.2066	3.1741	3.1471	3.1263	3.1157
.925	5	5.0278	4.5456	4.3037	4.1598	4.0642	3.9961	3.9451	3.9055	3.8738	3.8478	3.7667	3.7242	3.6802	3.6439	3.6160	3.6019
.950		6.6079	5.7861	5.4094	5.1922	5.0503	4.9503	4.8759	4.8183	4.7725	4.7351	4.6188	4.5581	4.4957	4.4444	4.4051	4.3851
.975		10.007	8.4336	7.7636	7.3879	7.1464	6.9777	6.8531	6.7572	6.6810	6.6192	6.4277	6.3286	6.2269	6.1436	6.0800	6.0478
.990		16.258	13.274	12.060	11.392	10.967	10.672	10.456	10.289	10.158	10.051	9.7222	9.5527	9.3794	9.2378	9.1299	9.0754
.995		22.785	18.314	16.530	15.556	14.940	14.513	14.200	13.961	13.772	13.618	13.146	12.904	12.656	12.454	12.300	12.222

α	m ↓	n → 1	2	3	4	5	6	7	8	9	10	15	20	30	50	100	200
.800		2.0729	2.1299	2.1126	2.0924	2.0755	2.0619	2.0508	2.0417	2.0342	2.0278	2.0068	1.9951	1.9825	1.9717	1.9632	1.9588
.825		2.3650	2.3634	2.3198	2.2847	2.2581	2.2377	2.2216	2.2086	2.1980	2.1891	2.1602	2.1444	2.1277	2.1135	2.1023	2.0966
.850		2.7231	2.6462	2.5699	2.5164	2.4780	2.4493	2.4270	2.4093	2.3949	2.3830	2.3446	2.3239	2.3021	2.2837	2.2694	2.2620
.875		3.1761	3.0000	2.8817	2.8048	2.7514	2.7122	2.6823	2.6587	2.6396	2.6238	2.5736	2.5467	2.5186	2.4950	2.4768	2.4674
.900		3.7760	3.4633	3.2888	3.1808	3.1075	3.0546	3.0145	2.9830	2.9577	2.9369	2.8712	2.8363	2.8000	2.7697	2.7463	2.7343
.925	6	4.6269	4.1138	3.8584	3.7061	3.6047	3.5323	3.4779	3.4354	3.4015	3.3736	3.2861	3.2400	3.1921	3.1524	3.1218	3.1062
.950		5.9874	5.1433	4.7571	4.5337	4.3874	4.2839	4.2067	4.1468	4.0990	4.0600	3.9381	3.8742	3.8082	3.7537	3.7117	3.6904
.975		8.8131	7.2598	6.5988	6.2272	5.9876	5.8198	5.6955	5.5996	5.5234	5.4613	5.2687	5.1684	5.0652	4.9804	4.9154	4.8824
.990		13.745	10.925	9.7796	9.1483	8.7459	8.4661	8.2600	8.1017	7.9761	7.8741	7.5590	7.3958	7.2285	7.0915	6.9867	6.9336
.995		18.635	14.544	12.917	12.027	11.464	11.073	10.786	10.566	10.392	10.250	9.8140	9.5888	9.3583	9.1697	9.0257	8.9529
.800		2.0020	2.0434	2.0186	1.9937	1.9736	1.9575	1.9445	1.9339	1.9251	1.9176	1.8930	1.8793	1.8646	1.8519	1.8419	1.8367
.825		2.2776	2.2589	2.2073	2.1672	2.1371	2.1140	2.0959	2.0812	2.0692	2.0592	2.0264	2.0085	1.9893	1.9730	1.9602	1.9536
.850		2.6134	2.5183	2.4334	2.3746	2.3324	2.3009	2.2764	2.2570	2.2411	2.2279	2.1854	2.1623	2.1379	2.1173	2.1012	2.0929
.875		3.0354	2.8401	2.7129	2.6305	2.5732	2.5310	2.4988	2.4733	2.4526	2.4355	2.3809	2.3516	2.3206	2.2947	2.2745	2.2641
.900		3.5894	3.2574	3.0741	2.9605	2.8833	2.8274	2.7849	2.7516	2.7247	2.7025	2.6322	2.5947	2.5555	2.5226	2.4971	2.4841
.925	7	4.3670	3.8363	3.5731	3.4157	3.3107	3.2354	3.1788	3.1345	3.0989	3.0697	2.9777	2.9290	2.8782	2.8359	2.8031	2.7863
.950		5.5915	4.7374	4.3468	4.1203	3.9715	3.8660	3.7870	3.7257	3.6767	3.6365	3.5107	3.4445	3.3758	3.3189	3.2749	3.2525
.975		8.0727	6.5415	5.8898	5.5226	5.2852	5.1186	4.9949	4.8993	4.8232	4.7611	4.5678	4.4667	4.3624	4.2763	4.2101	4.1764
.990		12.246	9.5466	8.4513	7.8466	7.4604	7.1914	6.9928	6.8401	6.7188	6.6200	6.3143	6.1554	5.9920	5.8577	5.7547	5.7024
.995		16.236	12.404	10.882	10.050	9.5220	9.1553	8.8853	8.6781	8.5138	8.3803	7.9678	7.7540	7.5345	7.3544	7.2165	7.1466
.800		1.9511	1.9814	1.9512	1.9230	1.9005	1.8826	1.8682	1.8564	1.8466	1.8383	1.8109	1.7956	1.7791	1.7648	1.7535	1.7476
.825		2.2150	2.1844	2.1271	2.0834	2.0507	2.0257	2.0060	1.9901	1.9770	1.9660	1.9303	1.9106	1.8895	1.8715	1.8573	1.8499
.850		2.5352	2.4274	2.3366	2.2740	2.2291	2.1955	2.1694	2.1486	2.1316	2.1174	2.0717	2.0467	2.0202	1.9978	1.9801	1.9710
.875		2.9356	2.7272	2.5939	2.5076	2.4474	2.4031	2.3692	2.3423	2.3204	2.3023	2.2443	2.2129	2.1798	2.1518	2.1300	2.1187
.900		3.4579	3.1131	2.9238	2.8064	2.7264	2.6683	2.6241	2.5893	2.5612	2.5380	2.4642	2.4246	2.3830	2.3481	2.3208	2.3068
.925	8	4.1851	3.6435	3.3752	3.2145	3.1070	3.0297	2.9714	2.9258	2.8891	2.8589	2.7634	2.7125	2.6593	2.6149	2.5803	2.5626
.950		5.3177	4.4590	4.0662	3.8379	3.6875	3.5806	3.5005	3.4381	3.3881	3.3472	3.2184	3.1503	3.0794	3.0204	2.9747	2.9513
.975		7.5709	6.0595	5.4160	5.0526	4.8173	4.6517	4.5286	4.4333	4.3572	4.2951	4.1012	3.9995	3.8940	3.8067	3.7393	3.7050
.990		11.259	8.6491	7.5910	7.0061	6.6318	6.3707	6.1776	6.0289	5.9106	5.8143	5.5151	5.3591	5.1981	5.0654	4.9633	4.9114
.995		14.688	11.042	9.5965	8.8051	8.3018	7.9520	7.6942	7.4959	7.3386	7.2107	6.8142	6.6082	6.3961	6.2215	6.0875	6.0194

α	m ↓ / n → 1	2	3	4	5	6	7	8	9	10	15	20	30	50	100	200
.800	1.9128	1.9349	1.9007	1.8699	1.8455	1.8262	1.8107	1.7979	1.7874	1.7784	1.7488	1.7321	1.7141	1.6985	1.6860	1.6795
.825	2.1680	2.1287	2.0671	2.0206	1.9860	1.9594	1.9385	1.9216	1.9077	1.8960	1.8578	1.8367	1.8140	1.7945	1.7790	1.7710
.850	2.4766	2.3597	2.2644	2.1989	2.1520	2.1168	2.0894	2.0675	2.0496	2.0347	1.9863	1.9598	1.9316	1.9075	1.8885	1.8786
.875	2.8611	2.6433	2.5056	2.4163	2.3540	2.3081	2.2728	2.2448	2.2220	2.2031	2.1423	2.1093	2.0742	2.0446	2.0213	2.0092
.900	3.3603	3.0064	2.8129	2.6927	2.6106	2.5509	2.5053	2.4694	2.4403	2.4163	2.3396	2.2983	2.2547	2.2180	2.1892	2.1744
.925	4.0510	3.5020	3.2302	3.0671	2.9578	2.8790	2.8194	2.7727	2.7351	2.7041	2.6058	2.5532	2.4980	2.4516	2.4155	2.3969
.950	5.1174	4.2565	3.8625	3.6331	3.4817	3.3738	3.2927	3.2296	3.1789	3.1373	3.0061	2.9365	2.8637	2.8028	2.7556	2.7313
.975	7.2093	5.7147	5.0781	4.7181	4.4844	4.3197	4.1970	4.1020	4.0260	3.9639	3.7694	3.6669	3.5604	3.4719	3.4034	3.3684
.990	10.561	8.0215	6.9919	6.4221	6.0569	5.8018	5.6129	5.4671	5.3511	5.2565	4.9621	4.8080	4.6486	4.5167	4.4150	4.3631
.995	13.614	10.107	8.7171	7.9559	7.4712	7.1338	6.8849	6.6933	6.5411	6.4172	6.0325	5.8318	5.6248	5.4539	5.3223	5.2553
.800	1.8829	1.8986	1.8614	1.8286	1.8027	1.7823	1.7658	1.7523	1.7411	1.7316	1.7000	1.6823	1.6629	1.6461	1.6327	1.6256
.825	2.1314	2.0854	2.0205	1.9719	1.9357	1.9079	1.8860	1.8683	1.8537	1.8414	1.8012	1.7788	1.7547	1.7339	1.7173	1.7087
.850	2.4312	2.3072	2.2085	2.1408	2.0922	2.0557	2.0273	2.0046	1.9860	1.9704	1.9198	1.8920	1.8622	1.8368	1.8166	1.8061
.875	2.8035	2.5786	2.4374	2.3459	2.2820	2.2347	2.1983	2.1694	2.1459	2.1263	2.0632	2.0288	1.9921	1.9609	1.9363	1.9236
.900	3.2850	2.9245	2.7277	2.6053	2.5216	2.4606	2.4140	2.3772	2.3473	2.3226	2.2435	2.2007	2.1554	2.1171	2.0869	2.0713
.925	3.9480	3.3938	3.1195	2.9546	2.8438	2.7639	2.7033	2.6558	2.6174	2.5858	2.4851	2.4310	2.3740	2.3260	2.2884	2.2691
.950	4.9646	4.1028	3.7083	3.4780	3.3258	3.2172	3.1355	3.0717	3.0204	2.9782	2.8450	2.7740	2.6996	2.6371	2.5884	2.5634
.975	6.9367	5.4564	4.8256	4.4683	4.2361	4.0721	3.9498	3.8549	3.7790	3.7168	3.5217	3.4185	3.3110	3.2214	3.1517	3.1161
.990	10.044	7.5594	6.5523	5.9943	5.6363	5.3858	5.2001	5.0567	4.9424	4.8492	4.5581	4.4054	4.2469	4.1155	4.0137	3.9617
.995	12.826	9.4270	8.0808	7.3428	6.8724	6.5446	6.3025	6.1159	5.9676	5.8467	5.4707	5.2740	5.0705	4.9022	4.7722	4.7058
.800	1.7972	1.7952	1.7490	1.7103	1.6801	1.6561	1.6368	1.6209	1.6076	1.5964	1.5584	1.5367	1.5127	1.4914	1.4741	1.4649
.825	2.0269	1.9621	1.8879	1.8331	1.7923	1.7608	1.7359	1.7156	1.6988	1.6846	1.6375	1.6108	1.5816	1.5560	1.5352	1.5242
.850	2.3020	2.1586	2.0504	1.9763	1.9228	1.8825	1.8509	1.8254	1.8044	1.7868	1.7289	1.6965	1.6613	1.6305	1.6057	1.5926
.875	2.6404	2.3963	2.2457	2.1478	2.0790	2.0278	1.9881	1.9563	1.9303	1.9086	1.8377	1.7984	1.7559	1.7191	1.6895	1.6739
.900	3.0732	2.6952	2.4898	2.3614	2.2730	2.2081	2.1582	2.1185	2.0862	2.0593	1.9722	1.9243	1.8728	1.8284	1.7929	1.7743
.925	3.6605	3.0938	2.8132	2.6436	2.5287	2.4453	2.3818	2.3316	2.2908	2.2570	2.1484	2.0891	2.0257	1.9714	1.9281	1.9055
.950	4.5431	3.6823	3.2874	3.0556	2.9013	2.7905	2.7066	2.6408	2.5876	2.5437	2.4034	2.3275	2.2468	2.1780	2.1234	2.0950
.975	6.1995	4.7650	4.1528	3.8043	3.5764	3.4147	3.2934	3.1987	3.1227	3.0602	2.8621	2.7559	2.6437	2.5488	2.4739	2.4352
.990	8.6831	6.3589	5.4170	4.8932	4.5556	4.3183	4.1415	4.0045	3.8948	3.8049	3.5222	3.3719	3.2141	3.0814	2.9772	2.9235
.995	10.798	7.7007	6.4760	5.8029	5.3721	5.0708	4.8472	4.6743	4.5364	4.4235	4.0698	3.8826	3.6867	3.5225	3.3941	3.3279

α	m ↓	n → 1	2	3	4	5	6	7	8	9	10	15	20	30	50	100	200
.800		1.7565	1.7462	1.6958	1.6543	1.6218	1.5960	1.5752	1.5581	1.5436	1.5313	1.4897	1.4656	1.4385	1.4143	1.3941	1.3833
.825		1.9775	1.9041	1.8255	1.7677	1.7245	1.6912	1.6646	1.6429	1.6249	1.6096	1.5585	1.5292	1.4967	1.4678	1.4439	1.4311
.850		2.2411	2.0890	1.9764	1.8991	1.8433	1.8010	1.7677	1.7407	1.7185	1.6997	1.6376	1.6023	1.5635	1.5291	1.5010	1.4859
.875		2.5640	2.3114	2.1566	2.0556	1.9844	1.9311	1.8897	1.8565	1.8291	1.8062	1.7308	1.6885	1.6421	1.6014	1.5681	1.5504
.900		2.9747	2.5893	2.3801	2.2489	2.1582	2.0913	2.0397	1.9985	1.9649	1.9367	1.8449	1.7938	1.7382	1.6896	1.6501	1.6292
.925	20	3.5280	2.9567	2.6735	2.5017	2.3850	2.2999	2.2347	2.1831	2.1410	2.1061	1.9927	1.9301	1.8624	1.8036	1.7560	1.7309
.950		4.3512	3.4928	3.0984	2.8661	2.7109	2.5990	2.5140	2.4471	2.3928	2.3479	2.2033	2.1242	2.0391	1.9656	1.9066	1.8755
.975		5.8715	4.4613	3.8587	3.5147	3.2891	3.1283	3.0074	2.9128	2.8365	2.7737	2.5731	2.4645	2.3486	2.2493	2.1699	2.1284
.990		8.0960	5.8489	4.9382	4.4307	4.1027	3.8714	3.6987	3.5644	3.4567	3.3682	3.0880	2.9377	2.7785	2.6430	2.5353	2.4792
.995		9.9439	6.9865	5.8177	5.1743	4.7616	4.4721	4.2569	4.0900	3.9564	3.8470	3.5020	3.3178	3.1234	2.9586	2.8282	2.7603
.800		1.7172	1.6990	1.6445	1.6001	1.5654	1.5378	1.5154	1.4968	1.4812	1.4678	1.4220	1.3949	1.3641	1.3358	1.3116	1.2983
.825		1.9299	1.8483	1.7655	1.7047	1.6592	1.6239	1.5956	1.5725	1.5531	1.5367	1.4810	1.4486	1.4119	1.3785	1.3502	1.3347
.850		2.1826	2.0223	1.9054	1.8252	1.7669	1.7226	1.6875	1.6590	1.6354	1.6154	1.5483	1.5097	1.4663	1.4271	1.3941	1.3761
.875		2.4908	2.2305	2.0716	1.9677	1.8940	1.8387	1.7955	1.7606	1.7318	1.7076	1.6270	1.5810	1.5298	1.4838	1.4452	1.4243
.900		2.8807	2.4887	2.2761	2.1422	2.0492	1.9803	1.9269	1.8841	1.8490	1.8195	1.7223	1.6673	1.6065	1.5522	1.5069	1.4824
.925	30	3.4023	2.8274	2.5421	2.3682	2.2496	2.1627	2.0959	2.0427	1.9992	1.9629	1.8441	1.7775	1.7042	1.6393	1.5855	1.5564
.950		4.1709	3.3158	2.9223	2.6896	2.5336	2.4205	2.3343	2.2662	2.2107	2.1646	2.0148	1.9317	1.8409	1.7609	1.6950	1.6597
.975		5.5675	4.1821	3.5894	3.2499	3.0265	2.8667	2.7460	2.6513	2.5746	2.5112	2.3072	2.1952	2.0739	1.9681	1.8816	1.8354
.990		7.5625	5.3903	4.5097	4.0179	3.6990	3.4735	3.3045	3.1726	3.0665	2.9791	2.7002	2.5487	2.3860	2.2450	2.1307	2.0700
.995		9.1797	6.3547	5.2388	4.6234	4.2276	3.9492	3.7416	3.5801	3.4505	3.3440	3.0057	2.8230	2.6278	2.4594	2.3234	2.2514
.800		1.6867	1.6624	1.6048	1.5581	1.5216	1.4924	1.4687	1.4490	1.4323	1.4179	1.3682	1.3383	1.3035	1.2706	1.2415	1.2249
.825		1.8930	1.8052	1.7191	1.6560	1.6086	1.5716	1.5420	1.5176	1.4971	1.4796	1.4197	1.3842	1.3432	1.3048	1.2710	1.2518
.850		2.1374	1.9710	1.8508	1.7682	1.7080	1.6620	1.6254	1.5956	1.5707	1.5496	1.4780	1.4361	1.3880	1.3433	1.3043	1.2822
.875		2.4345	2.1684	2.0064	1.9002	1.6086	1.7676	1.7228	1.6866	1.6565	1.6311	1.5457	1.4961	1.4398	1.3878	1.3427	1.3172
.900		2.8087	2.4120	2.1967	2.0608	1.9660	1.8954	1.8405	1.7963	1.7598	1.7291	1.6269	1.5681	1.5018	1.4409	1.3885	1.3590
.925	50	3.3065	2.7292	2.4424	2.2671	2.1469	2.0586	1.9904	1.9358	1.8911	1.8356	1.7296	1.6589	1.5798	1.5078	1.4460	1.4115
.950		4.0343	3.1826	2.7900	2.5572	2.4004	2.2864	2.1992	2.1299	2.0733	2.0261	1.8714	1.7841	1.6872	1.5995	1.5249	1.4835
.975		5.3403	3.9749	3.3902	3.0544	2.8326	2.6736	2.5530	2.4579	2.3808	2.3168	2.1090	1.9933	1.8659	1.7520	1.6558	1.6029
.990		7.1706	5.0566	4.1993	3.7195	3.4077	3.1864	3.0202	2.8900	2.7850	2.6981	2.4190	2.2652	2.0976	1.9490	1.8248	1.7567
.995		8.6258	5.9016	4.8259	4.2316	3.8486	3.5785	3.3764	3.2189	3.0920	2.9875	2.6531	2.4702	2.2717	2.0967	1.9512	1.8719

α	m ↓	n → 1	2	3	4	5	6	7	8	9	10	15	20	30	50	100	200
.800		1.6643	1.6356	1.5757	1.5273	1.4894	1.4591	1.4343	1.4136	1.3961	1.3809	1.3278	1.2954	1.2569	1.2191	1.1839	1.1626
.825		1.8660	1.7737	1.6853	1.6204	1.5715	1.5334	1.5026	1.4772	1.4557	1.4374	1.3739	1.3356	1.2905	1.2467	1.2063	1.1819
.850		2.1045	1.9336	1.8111	1.7267	1.6650	1.6177	1.5800	1.5491	1.5232	1.5012	1.4257	1.3807	1.3282	1.2776	1.2312	1.2034
.875		2.3935	2.1233	1.9591	1.8512	1.7741	1.7158	1.6698	1.6325	1.6014	1.5750	1.4855	1.4326	1.3714	1.3130	1.2597	1.2280
.900		2.7564	2.3564	2.1394	2.0019	1.9057	1.8339	1.7778	1.7324	1.6949	1.6632	1.5566	1.4943	1.4227	1.3548	1.2934	1.2571
.925	100	3.2372	2.6585	2.3707	2.1943	2.0730	1.9835	1.9142	1.8586	1.8128	1.7743	1.6458	1.5715	1.4866	1.4068	1.3353	1.2931
.950		3.9361	3.0873	2.6955	2.4626	2.3053	2.1906	2.1025	2.0323	1.9748	1.9267	1.7675	1.6764	1.5733	1.4772	1.3917	1.3416
.975		5.1786	3.8284	3.2496	2.9166	2.6961	2.5374	2.4168	2.3215	2.2439	2.1793	1.9679	1.8486	1.7148	1.5917	1.4833	1.4203
.990		6.8953	4.8239	3.9837	3.5127	3.2059	2.9877	2.8233	2.6943	2.5898	2.5033	2.2230	2.0666	1.8933	1.7353	1.5977	1.5184
.995		8.2407	5.5892	4.5424	3.9634	3.5895	3.3252	3.1271	2.9722	2.8472	2.7440	2.4113	2.2270	2.0239	1.8400	1.6809	1.5897
.800		1.6533	1.6225	1.5614	1.5122	1.4736	1.4427	1.4173	1.3961	1.3781	1.3625	1.3076	1.2738	1.2329	1.1919	1.1521	1.1266
.825		1.8527	1.7582	1.6686	1.6029	1.5533	1.5145	1.4831	1.4572	1.4353	1.4164	1.3510	1.3111	1.2635	1.2161	1.1706	1.1415
.850		2.0882	1.9152	1.7916	1.7063	1.6439	1.5959	1.5576	1.5261	1.4997	1.4772	1.3996	1.3529	1.2976	1.2431	1.1911	1.1581
.875		2.3734	2.1012	1.9360	1.8272	1.7494	1.6904	1.6438	1.6059	1.5742	1.5473	1.4555	1.4008	1.3366	1.2738	1.2144	1.1770
.900		2.7308	2.3293	2.1114	1.9732	1.8763	1.8038	1.7470	1.7011	1.6630	1.6308	1.5218	1.4575	1.3826	1.3100	1.2418	1.1991
.925	200	3.2034	2.6241	2.3358	2.1589	2.0370	1.9470	1.8771	1.8209	1.7745	1.7354	1.6045	1.5280	1.4396	1.3547	1.2755	1.2263
.950		3.8884	3.0411	2.6497	2.4168	2.2592	2.1441	2.0556	1.9849	1.9269	1.8783	1.7166	1.6233	1.5164	1.4146	1.3206	1.2626
.975		5.1004	3.7578	3.1820	2.8503	2.6304	2.4720	2.3513	2.2558	2.1780	2.1130	1.8996	1.7780	1.6403	1.5108	1.3927	1.3205
.990		6.7633	4.7128	3.8810	3.4143	3.1100	2.8933	2.7298	2.6012	2.4971	2.4106	2.1294	1.9713	1.7941	1.6295	1.4811	1.3912
.995		8.0572	5.4412	4.4085	3.8368	3.4674	3.2059	3.0097	2.8560	2.7319	2.6292	2.2970	2.1116	1.9051	1.7147	1.5442	1.4416

5. Table 4. Values of the t C.D.F.

Entries are values of x such that

$$\alpha = \int_{-\infty}^{x} \frac{\Gamma\left(\frac{n+1}{2}\right)}{\sqrt{n\pi}\,\Gamma\left(\frac{n}{2}\right)} \left(1 + \frac{t^2}{n}\right)^{-\frac{(n+1)}{2}} dt$$

for various values of α and degrees of freedom n. For values of $\alpha < 0.5$, use the identity $t_{\alpha} = -t_{1-\alpha}$. These values were obtained from Table 3 using the identity $t_{\gamma} = \sqrt{F_{2\gamma-1;1,n}}$.

n \ α	.80	.85	.90	.925	.950	.975	.980	.990	.995
1	1.376	1.962	3.078	4.165	6.314	12.73	15.87	31.75	64.00
2	1.061	1.386	1.886	2.282	2.920	4.303	4.849	6.964	9.925
3	0.978	1.250	1.638	1.924	2.353	3.182	3.482	4.541	5.841
4	0.941	1.190	1.533	1.778	2.132	2.776	2.998	3.747	4.604
5	0.920	1.156	1.476	1.699	2.015	2.571	2.756	3.365	4.032
6	0.906	1.134	1.440	1.650	1.943	2.447	2.612	3.143	3.707
7	0.896	1.119	1.415	1.617	1.895	2.365	2.517	2.998	3.499
8	0.889	1.108	1.397	1.592	1.860	2.306	2.449	2.896	3.355
9	0.883	1.100	1.383	1.574	1.833	2.262	2.398	2.821	3.250
10	0.879	1.093	1.372	1.559	1.812	2.228	2.359	2.764	3.169
11	0.876	1.088	1.363	1.548	1.796	2.201	2.328	2.718	3.106
12	0.873	1.083	1.356	1.538	1.782	2.179	2.303	2.681	3.054
13	0.870	1.080	1.350	1.530	1.771	2.160	2.282	2.650	3.012
14	0.868	1.076	1.345	1.523	1.761	2.145	2.264	2.624	2.977
15	0.866	1.074	1.341	1.517	1.753	2.132	2.248	2.602	2.947
16	0.865	1.071	1.337	1.512	1.746	2.120	2.235	2.584	2.921
17	0.863	1.069	1.333	1.508	1.740	2.110	2.224	2.567	2.898
18	0.862	1.067	1.330	1.504	1.734	2.101	2.214	2.552	2.878
19	0.861	1.066	1.328	1.500	1.729	2.093	2.205	2.540	2.861
20	0.860	1.064	1.325	1.497	1.725	2.086	2.197	2.528	2.845
21	0.859	1.063	1.323	1.494	1.721	2.080	2.189	2.518	2.831
22	0.858	1.061	1.321	1.492	1.717	2.074	2.183	2.508	2.819
23	0.858	1.060	1.320	1.489	1.714	2.069	2.177	2.500	2.807
24	0.857	1.059	1.318	1.487	1.711	2.064	2.172	2.492	2.797
25	0.856	1.058	1.316	1.485	1.708	2.060	2.167	2.485	2.788
26	0.856	1.058	1.315	1.483	1.706	2.056	2.162	2.479	2.779
27	0.855	1.057	1.314	1.482	1.703	2.052	2.158	2.473	2.771
28	0.855	1.056	1.312	1.480	1.701	2.048	2.154	2.467	2.763
29	0.854	1.055	1.311	1.479	1.699	2.045	2.150	2.462	2.756
30	0.854	1.055	1.310	1.477	1.697	2.042	2.147	2.457	2.750

6. Table 5. Values of the Poisson mass function.

Entries are values of the Poisson mass function

$$m(x) = \frac{e^{-\lambda} \lambda^x}{x!}$$

for values of λ and x shown.

The entries are to be read with a decimal point preceding the digits.

x \ λ	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50
0	9512	9048	8607	8187	7788	7408	7047	6703	6376	6065
1	0476	0905	1291	1637	1947	2222	2466	2681	2869	3033
2	0012	0045	0097	0164	0243	0333	0432	0536	0646	0758
3	0000	0002	0005	0011	0020	0033	0050	0072	0097	0126
4	0000	0000	0000	0001	0001	0003	0004	0007	0011	0016
5	0000	0000	0000	0000	0000	0000	0000	0001	0001	0002

x \ λ	0.55	0.60	0.65	0.70	0.75	0.80	0.85	0.90	0.95	1.00
0	5769	5488	5220	4966	4724	4493	4274	4066	3867	3679
1	3173	3293	3393	3476	3543	3595	3633	3659	3674	3679
2	0873	0988	1103	1217	1329	1438	1544	1647	1745	1839
3	0160	0198	0239	0284	0332	0383	0437	0494	0553	0613
4	0022	0030	0039	0050	0062	0077	0093	0111	0131	0153
5	0002	0004	0005	0007	0009	0012	0016	0020	0025	0031
6	0000	0000	0001	0001	0001	0002	0002	0003	0004	0005

x \ λ	1.05	1.10	1.15	1.20	1.25	1.30	1.35	1.40	1.45	1.50
0	3499	3329	3166	3012	2865	2725	2592	2466	2346	2231
1	3674	3662	3641	3614	3581	3543	3500	3452	3401	3347
2	1929	2014	2094	2169	2238	2303	2362	2417	2466	2510
3	0675	0738	0803	0867	0933	0998	1063	1128	1192	1255
4	0177	0203	0231	0260	0291	0324	0359	0395	0432	0471
5	0037	0045	0053	0062	0073	0084	0097	0111	0125	0141
6	0007	0008	0010	0012	0015	0018	0022	0026	0030	0035
7	0001	0001	0002	0002	0003	0003	0004	0005	0006	0008
8	0000	0000	0000	0000	0000	0001	0001	0001	0001	0001

x \ λ	1.55	1.60	1.65	1.70	1.75	1.80	1.85	1.90	1.95	2.00
0	2122	2019	1920	1827	1738	1653	1572	1496	1423	1353
1	3290	3230	3169	3106	3041	2975	2909	2842	2774	2707
2	2550	2584	2614	2640	2661	2678	2691	2700	2705	2707
3	1317	1378	1438	1496	1552	1607	1659	1710	1758	1804
4	0510	0551	0593	0636	0679	0723	0767	0812	0857	0902
5	0158	0176	0196	0216	0238	0260	0284	0309	0334	0361
6	0041	0047	0054	0061	0069	0078	0088	0098	0109	0120
7	0009	0011	0013	0015	0017	0020	0023	0027	0030	0034
8	0002	0002	0003	0003	0004	0005	0005	0006	0007	0009
9	0000	0000	0000	0001	0001	0001	0001	0001	0002	0002

x \ λ	2.05	2.10	2.15	2.20	2.25	2.30	2.35	2.40	2.45	2.50
0	1287	1225	1165	1108	1054	1003	0954	0907	0863	0821
1	2639	2572	2504	2438	2371	2306	2241	2177	2114	2052
2	2705	2700	2692	2681	2668	2652	2633	2613	2590	2565
3	1848	1890	1929	1966	2001	2033	2063	2090	2115	2138
4	0947	0992	1037	1082	1126	1169	1212	1254	1295	1336
5	0388	0417	0446	0476	0506	0538	0570	0602	0635	0668
6	0133	0146	0160	0174	0190	0206	0223	0241	0259	0278
7	0039	0044	0049	0055	0061	0068	0075	0083	0091	0099
8	0010	0011	0013	0015	0017	0019	0022	0025	0028	0031
9	0002	0003	0003	0004	0004	0005	0006	0007	0008	0009
10	0000	0001	0001	0001	0001	0001	0001	0002	0002	0002

x \ λ	2.55	2.60	2.65	2.70	2.75	2.80	2.85	2.90	2.95	3.00
0	0781	0743	0707	0672	0639	0608	0578	0550	0523	0498
1	1991	1931	1872	1815	1758	1703	1649	1596	1544	1494
2	2539	2510	2481	2450	2417	2384	2349	2314	2277	2240
3	2158	2176	2191	2205	2216	2225	2232	2237	2239	2240
4	1376	1414	1452	1488	1523	1557	1590	1622	1652	1680
5	0702	0735	0769	0804	0838	0872	0906	0940	0974	1008
6	0298	0319	0340	0362	0384	0407	0431	0455	0479	0504
7	0109	0118	0129	0139	0151	0163	0175	0188	0202	0216
8	0035	0038	0043	0047	0052	0057	0062	0068	0074	0081
9	0010	0011	0013	0014	0016	0018	0020	0022	0024	0027
10	0003	0003	0003	0004	0004	0005	0006	0006	0007	0008
11	0001	0001	0001	0001	0001	0001	0001	0002	0002	0002

x \ λ	3.05	3.10	3.15	3.20	3.25	3.30	3.35	3.40	3.45	3.50
0	0474	0450	4029	0408	0388	0369	0351	0334	0316	0302
1	1444	1397	1350	1304	1260	1217	1175	1135	1095	1057
2	2203	2165	2126	2087	2048	2008	1969	1929	1889	1850
3	2239	2237	2232	2226	2218	2209	2198	2186	2173	2158
4	1708	1733	1758	1781	1802	1823	1841	1858	1874	1888
5	1042	1075	1108	1140	1172	1203	1234	1264	1293	1322
6	0530	0555	0581	0608	0635	0662	0689	0716	0743	0771
7	0231	0246	0262	0278	0295	0312	0330	0348	0366	0385
8	0088	0095	0103	0111	0120	0129	0138	0148	0158	0169
9	0030	0033	0036	0040	0043	0047	0051	0056	0061	0066
10	0009	0010	0011	0013	0014	0016	0017	0019	0021	0023
11	0003	0003	0003	0004	0004	0005	0005	0006	0007	0007
12	0001	0001	0001	0001	0001	0001	0001	0002	0002	0002

x \ λ	3.55	3.60	3.65	3.70	3.75	3.80	3.85	3.90	3.95	4.00
0	0287	0273	0260	0247	0235	0224	0213	0202	0193	0183
1	1020	0984	0949	0915	0882	0850	0819	0789	0781	0733
2	1810	1771	1731	1692	1654	1615	1577	1539	1502	1465
3	2142	2125	2106	2087	2067	2046	2024	2001	1987	1954
4	1901	1912	1922	1931	1938	1944	1948	1951	1953	1954
5	1350	1377	1403	1429	1453	1477	1500	1522	1543	1563
6	0799	0826	0854	0881	0908	0936	0962	0989	1016	1042
7	0405	0425	0445	0466	0487	0508	0529	0551	0573	0595
8	0180	0191	0203	0215	0228	0241	0255	0269	2083	2098
9	0071	0076	0082	0089	0095	0102	0109	0116	0124	0132
10	0025	0028	0030	0033	0036	0039	0042	0045	0049	0053
11	0008	0009	0010	0011	0012	0013	0015	0016	0018	0019
12	0002	0003	0003	0003	0004	0004	0005	0005	0006	0006
13	0001	0001	0001	0001	0001	0001	0001	0002	0002	0002

x \ λ	4.05	4.10	4.15	4.20	4.25	4.30	4.35	4.40	4.45	4.50
0	0174	0166	0158	0150	0143	0136	0129	0123	0117	0111
1	0706	0679	0654	0630	0606	0583	0561	0540	0520	0500
2	1429	1393	1358	1323	1288	1254	1221	1188	1156	1125
3	1929	1904	1878	1852	1825	1798	1771	1743	1715	1687
4	1953	1951	1948	1944	1939	1933	1926	1917	1908	1898
5	1582	1600	1617	1633	1648	1662	1675	1687	1698	1708
6	1068	1093	1118	1143	1167	1191	1215	1237	1260	1281
7	0618	0640	0663	0686	0709	0732	0755	0778	0801	0824
8	0313	0328	0344	0360	0377	0393	0410	0428	0445	0463
9	0141	0150	0159	0168	0178	0188	0198	0209	0220	0232
10	0057	0061	0066	0071	0076	0081	0086	0092	0098	0104
11	0021	0023	0025	0027	0029	0032	0034	0037	0040	0043
12	0007	0008	0009	0009	0010	0011	0012	0013	0015	0016
13	0002	0002	0003	0003	0003	0004	0004	0005	0005	0006
14	0001	0001	0001	0001	0001	0001	0001	0001	0002	0002

x \ λ	4.55	4.60	4.65	4.70	4.75	4.80	4.85	4.90	4.95	5.00
0	0106	0101	0096	0091	0087	0082	0078	0074	0071	0067
1	0481	0462	0445	0427	0411	0395	0380	0365	0351	0337
2	1094	1063	1034	1005	0976	0948	0921	0894	0868	0842
3	1659	1631	1602	1574	1545	1517	1488	1460	1432	1404
4	1887	1875	1863	1849	1835	1820	1805	1789	1772	1755
5	1717	1725	1732	1738	1743	1747	1751	1753	1754	1755
6	1302	1323	1343	1362	1380	1398	1415	1432	1447	1462
7	0846	0869	0892	0914	0937	0959	0980	1002	1023	1044
8	0481	0500	0518	0537	0556	0575	0594	0614	0633	0653
9	0243	0255	0268	0281	0293	0307	0320	0334	0348	0363
10	0111	0118	0125	0132	0139	0147	0155	0164	0172	0181
11	0046	0049	0053	0056	0060	0064	0068	0073	0078	0082
12	0017	0019	0020	0022	0024	0026	0028	0030	0032	0034
13	0006	0007	0007	0008	0009	0009	0010	0011	0012	0013
14	0002	0002	0002	0003	0003	0003	0004	0004	0004	0005
15	0001	0001	0001	0001	0001	0001	0001	0001	0001	0002

x \ λ	5.10	5.20	5.30	5.40	5.50	5.60	5.70	5.80	5.90	6.00
0	0061	0055	0050	0045	0041	0037	0033	0030	0027	0025
1	0311	0287	0265	0244	0225	0207	0191	0176	0162	0149
2	0793	0746	0701	0659	0618	0580	0544	0509	0477	0446
3	1348	1293	1239	1185	1133	1082	1033	0985	0938	0892
4	1719	1681	1641	1600	1558	1515	1472	1428	1383	1339
5	1753	1748	1740	1728	1714	1697	1678	1656	1632	1606
6	1490	1515	1537	1555	1571	1584	1594	1601	1605	1606
7	1086	1125	1163	1200	1234	1267	1298	1326	1353	1377
8	0692	0731	0771	0810	0849	0887	0925	0962	0998	1033
9	0392	0423	0454	0486	0519	0552	0586	0620	0654	0688
10	0200	0220	0241	0262	0285	0309	0334	0359	0386	0413
11	0093	0104	0116	0129	0143	0157	0173	0190	0207	0225
12	0039	0045	0051	0058	0065	0073	0082	0092	0102	0113
13	0015	0018	0021	0024	0028	0032	0036	0041	0046	0052
14	0006	0007	0008	0009	0011	0013	0015	0017	0019	0022
15	0002	0002	0003	0003	0004	0005	0006	0007	0008	0009
16	0001	0001	0001	0001	0001	0002	0002	0002	0003	0003
17	0000	0000	0000	0000	0000	0001	0001	0001	0001	0001

x \ λ	6.10	6.20	6.30	6.40	6.50	6.60	6.70	6.80	6.90	7.00
0	0022	0020	0018	0017	0015	0014	0012	0011	0010	0009
1	0137	0126	0116	0106	0098	0090	0082	0076	0070	0064
2	0417	0390	0364	0340	0318	0296	0276	0258	0240	0223
3	0848	0806	0765	0726	0688	0652	0617	0584	0552	0521
4	1294	1249	1205	1162	1118	1076	1034	0992	0952	0912
5	1579	1549	1519	1487	1454	1420	1385	1349	1314	1277
6	1605	1601	1595	1586	1575	1562	1546	1529	1511	1490
7	1399	1418	1435	1450	1462	1472	1480	1486	1489	1490
8	1066	1099	1130	1160	1188	1215	1240	1263	1284	1304
9	0723	0757	0791	0825	0858	0891	0923	0954	0985	1014
10	0441	0469	0498	0528	0558	0588	0618	0649	0679	0710
11	0244	0265	0285	0307	0330	0353	0377	0401	0426	0452
12	0124	0137	0150	0164	0179	0194	0210	0227	0245	0263
13	0058	0065	0073	0081	0089	0099	0108	0119	0130	0142
14	0025	0029	0033	0037	0041	0046	0052	0058	0064	0071
15	0010	0012	0014	0016	0018	0020	0023	0026	0029	0033
16	0004	0005	0005	0006	0007	0008	0010	0011	0013	0014
17	0001	0002	0002	0002	0003	0003	0004	0004	0005	0006
18	0000	0001	0001	0001	0001	0001	0001	0002	0002	0002
19	0000	0000	0000	0000	0000	0000	0001	0001	0001	0001

x \ λ	7.10	7.20	7.30	7.40	7.50	7.60	7.70	7.80	7.90	8.00
0	0008	0007	0007	0006	0006	0005	0005	0004	0004	0003
1	0059	0054	0049	0045	0041	0038	0035	0032	0029	0027
2	0208	0194	0180	0167	0156	0145	0134	0125	0116	0107
3	0492	0464	0438	0413	0389	0366	0345	0324	0305	0286
4	0874	0836	0799	0764	0729	0696	0663	0632	0602	0573
5	1241	1204	1167	1130	1094	1057	1021	0986	0951	0916
6	1468	1445	1420	1394	1367	1339	1311	1282	1252	1221
7	1489	1486	1481	1474	1465	1454	1442	1428	1413	1396
8	1321	1337	1351	1363	1373	1381	1388	1392	1395	1396
9	1042	1070	1096	1121	1144	1167	1187	1207	1224	1241
10	0740	0770	0800	0829	0858	0887	0914	0941	0967	0993
11	0478	0504	0531	0558	0585	0613	0640	0667	0695	0722
12	0283	0303	0323	0344	0366	0388	0411	0434	0457	0481
13	0154	0168	0181	0196	0211	0227	0243	0260	0278	0296
14	0078	0086	0095	0104	0113	0123	0134	0145	0157	0169
15	0037	0041	0046	0051	0057	0062	0069	0075	0083	0090
16	0016	0019	0021	0024	0026	0030	0033	0037	0041	0045
17	0007	0008	0009	0010	0012	0013	0015	0017	0019	0021
18	0003	0003	0004	0004	0005	0006	0006	0007	0008	0009
19	0001	0001	0001	0002	0002	0002	0003	0003	0003	0004
20	0000	0000	0001	0001	0001	0001	0001	0001	0001	0002

x \ λ	8.10	8.20	8.30	8.40	8.50	8.60	8.70	8.80	8.90	9.00
0	0003	0003	0002	0002	0002	0002	0002	0002	0001	0001
1	0025	0023	0021	0019	0017	0016	0014	0013	0012	0011
2	0100	0092	0086	0079	0074	0068	0063	0058	0054	0050
3	0269	0252	0237	0222	0208	0195	0183	0171	0160	0150
4	0544	0517	0491	0466	0443	0420	0398	0377	0357	0337
5	0882	0849	0816	0784	0752	0722	0692	0663	0635	0607
6	1191	1160	1128	1097	1066	1034	1003	0972	0941	0911
7	1378	1358	1338	1317	1294	1271	1247	1222	1197	1171
8	1395	1392	1388	1382	1375	1366	1356	1344	1332	1318
9	1256	1269	1280	1290	1299	1306	1311	1315	1317	1318
10	1017	1040	1063	1084	1104	1123	1140	1157	1172	1186
11	0749	0776	0802	0828	0853	0878	0902	0925	0948	0970
12	0505	0530	0555	0579	0604	0629	0654	0679	0703	0728
13	0315	0334	0354	0374	0395	0416	0438	0459	0481	0504
14	0182	0196	0210	0225	0240	0256	0272	0289	0306	0324
15	0098	0107	0116	0126	0136	0147	0158	0169	0182	0194
16	0050	0055	0060	0066	0072	0079	0086	0093	0101	0109
17	0024	0026	0029	0033	0036	0040	0044	0048	0053	0058
18	0011	0012	0014	0015	0017	0019	0021	0024	0026	0029
19	0005	0005	0006	0007	0008	0009	0010	0011	0012	0014
20	0002	0002	0002	0003	0003	0004	0004	0005	0005	0006
21	0001	0001	0001	0001	0001	0002	0002	0002	0002	0003
22	0000	0000	0000	0000	0000	0001	0001	0001	0001	0001

x \ λ	9.10	9.20	9.30	9.40	9.50	9.60	9.70	9.80	9.90	10.00
0	0001	0001	0001	0001	0001	0001	0001	0001	0001	0000
1	0010	0009	0009	0008	0007	0007	0006	0005	0005	0005
2	0046	0043	0040	0037	0034	0031	0029	0027	0025	0023
3	0140	0131	0123	0115	0107	0100	0093	0087	0081	0076
4	0319	0302	0285	0269	0254	0240	0226	0213	0201	0189
5	0581	0555	0530	0506	0483	0460	0439	0418	0398	0378
6	0881	0851	0822	0793	0764	0736	0709	0682	0656	0631
7	1145	1118	1091	1064	1037	1010	0982	0955	0928	0901
8	1302	1286	1269	1251	1232	1212	1191	1170	1148	1126
9	1317	1315	1311	1306	1300	1293	1284	1274	1263	1251
10	1198	1210	1219	1228	1235	1241	1245	1249	1250	1251
11	0991	1012	1031	1049	1067	1083	1098	1112	1125	1137
12	0752	0776	0799	0822	0844	0866	0888	0908	0928	0948
13	0526	0549	0572	0594	0617	0640	0662	0685	0707	0729
14	0342	0361	0380	0399	0419	0439	0459	0479	0500	0521
15	0208	0221	0235	0250	0265	0281	0297	0313	0330	0347
16	0118	0127	0137	0147	0157	0168	0180	0192	0204	0217
17	0063	0069	0075	0081	0088	0095	0103	0111	0119	0128
18	0032	0035	0039	0042	0046	0051	0055	0060	0065	0071
19	0015	0017	0019	0021	0023	0026	0028	0031	0034	0037
20	0007	0008	0009	0010	0011	0012	0014	0015	0017	0019
21	0003	0003	0004	0004	0005	0006	0006	0007	0008	0009
22	0001	0001	0002	0002	0002	0002	0003	0003	0004	0004
23	0000	0001	0001	0001	0001	0001	0001	0001	0002	0002
24	0000	0000	0000	0000	0000	0000	0000	0001	0001	0001

x \ λ	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	15.0
0	0000	0002	0000	0000	0000	0000	0000	0000	0000	0000
1	0003	0010	0001	0001	0000	0000	0000	0000	0000	0000
2	0015	0037	0007	0004	0003	0002	0001	0001	0001	0000
3	0053	0102	0026	0018	0012	0008	0006	0004	0003	0002
4	0139	0224	0074	0053	0038	0027	0019	0013	0009	0006
5	0293	0411	0170	0127	0095	0070	0051	0037	0027	0019
6	0513	0646	0325	0255	0197	0152	0115	0087	0065	0048
7	0769	0888	0535	0437	0353	0281	0222	0174	0135	0104
8	1009	1085	0769	0655	0551	0457	0375	0304	0244	0194
9	1177	1194	0982	0874	0756	0661	0563	0473	0394	0324
10	1236	1194	1129	1048	0956	0859	0760	0663	0571	0486
11	1180	1094	1181	1144	1087	1015	0932	0844	0753	0663
12	1032	0926	1131	1144	1132	1099	1049	0984	0910	0829
13	0834	0728	1001	1056	1089	1099	1089	1060	1014	0956
14	0625	0534	0822	0905	0972	1021	1050	1060	1051	1024
15	0438	0367	0630	0724	0810	0885	0945	0989	1016	1024
16	0287	0237	0453	0543	0633	0719	0798	0866	0920	0960
17	0177	0145	0306	0383	0465	0550	0633	0713	0785	0847
18	0104	0084	0196	0255	0323	0397	0475	0554	0632	0706
19	0057	0046	0119	0161	0213	0272	0337	0409	0483	0557
20	0030	0024	0068	0097	0133	0177	0228	0286	0350	0418
21	0015	0012	0037	0055	0079	0109	0146	0191	0242	0299
22	0007	0006	0020	0030	0045	0065	0090	0121	0159	0204
23	0003	0003	0010	0016	0024	0037	0053	0074	0100	0133
24	0001	0001	0005	0008	0013	0020	0030	0043	0061	0083
25	0000	0000	0002	0004	0006	0010	0016	0024	0035	0050
26	0000	0000	0001	0002	0003	0005	0008	0013	0020	0029
27	0000	0000	0000	0001	0001	0002	0004	0007	0011	0016
28	0000	0000	0000	0000	0001	0001	0002	0003	0005	0009
29	0000	0000	0000	0000	0000	0000	0001	0002	0003	0004
30	0000	0000	0000	0000	0000	0000	0000	0001	0001	0002
31	0000	0000	0000	0000	0000	0000	0000	0000	0001	0001

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13. ABSTRACT

Tables that are available for certain probability distributions are limited in percentage values or parameter values. This report makes available additional such values for several probability distributions that occur in common practice.

14 KEY WORDS	LINK A		LINK B		LINK C	
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Probability Distributions						
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